

[COMMITTEE PRINT]

METRIC CONVERSION ACTIVITIES
OF FEDERAL GOVERNMENT AGENCIES
IN COMPLIANCE WITH P.L. 100-418,
SECTION 5164, METRIC USAGE

R E P O R T

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LETTER OF SUBMITTAL

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC, October 3, 1991.

Members of the Committee on Science, Space, and Technology.

DEAR COLLEAGUES: Section 5164 of the Omnibus Trade and Competitiveness Act of 1988 designates metric as the preferred system of measurement in the United States and requires each Federal agency to use the metric system to the extent economically feasible in its procurements, grants, and other business-related activities by the end of fiscal year 1992, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to U.S. firms, such as when foreign competitors are producing competing products in non-metric units. This Act is an important step towards improving the competitiveness of American business and is a place where the Federal Government must take the lead. Once implemented, metric is a simpler and less expensive system of measurement.

Most of our overseas competitors have long since converted to the metric system, forming what is now essentially a "Metric world" as it relates to international trade. Japan has recently identified the United States' non-metric activities as a "strategic impediment to trade," and the European Community has threatened to keep non-metric products out of their economic union. Given these events, a report on the state of metric conversion activities in the federal agencies is both important and timely. Strong government leadership in metric education and in encouraging private industry to move in step with world measurement standards is necessary. Foreign markets may close for U.S. manufacturers who cannot or will not produce metric products.

I asked the Congressional Research Service to prepare this summary of agency progress to date in complying with Section 5164 and the future plans of the agencies to complete their conversion to the metric system. The report was prepared before issuance of Executive Order 12770 of July 25, 1991 [Metric Usage in Federal Government Programs], and thus represents an important marker for measuring future progress.

I am pleased with the accomplishments made thus far by many agencies; however, there is clearly more to be done. I sincerely hope that the agencies submitting positive reports on their activities will serve as a model to those who did not submit a report or whose status of implementation is not yet headed towards full compliance with the law.

Sincerely,

GEORGE E. BROWN, Jr.,
Chairman.



EXECUTIVE ORDER

METRIC USAGE IN FEDERAL GOVERNMENT PROGRAMS

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Metric Conversion Act of 1975, Pub. L. No. 94-168 (15 U.S.C. 205 *et seq.*) ("the Metric Conversion Act"), as amended by section 5164 of the Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418 ("the Trade and Competitiveness Act"), and in order to implement the congressional designation of the metric system of measurement as the preferred system of weights and measures for United States trade and commerce, it is hereby ordered as follows:

Sec. 1. Coordination by the Department of Commerce.

(a) The Secretary of Commerce ("Secretary") is designated to direct and coordinate efforts by Federal departments and agencies to implement government metric usage in accordance with section 3 of the Metric Conversion Act (15 U.S.C. 205b), as amended by section 5164(b) of the Trade and Competitiveness Act.

(b) In furtherance of his duties under this Order, the Secretary is authorized:

(1) to charter an Interagency Council on Metric Policy ("ICMP"), which will assist the Secretary in coordinating Federal government-wide implementation of this Order. Conflicts and questions regarding implementation of this Order shall be resolved by the ICMP. The Secretary may establish such subcommittees and subchairs within this Council as may be necessary to carry out the purposes of this Order;

(2) to form such advisory committees representing other interests, including state and local governments and the business community, as may be necessary to achieve the maximum beneficial effects of this Order; and

(3) to issue guidelines, to promulgate rules and regulations, and to take such actions as may be necessary to carry out the purposes of this Order. Regulations promulgated by the Secretary shall function as policy guidelines for other agencies and departments.

(c) The Secretary shall report to the President annually regarding the progress made in implementing this Order. The report shall include:

(1) an assessment of progress made by individual Federal agencies towards implementing the purposes underlying this Order;

(2) an assessment of the effect that this Order has had on achieving the national goal of establishing the metric system as the preferred system of weights and measures for United States trade and commerce; and

(3) on October 1, 1992, any recommendations which the Secretary may have for additional measures, including proposed legislation, needed to achieve the full economic benefits of metric usage.

Sec. 2. Department and Agency Responsibilities.

All Executive Branch departments and agencies of the United States Government are directed to take all appropriate measures within their authority to carry out the provisions of this Order. Consistent with this mission, the head of each Executive department and agency shall:

(a) Use, to the extent economically feasible by September 30, 1992, or by such other date or dates established by the department or agency in consultation with the Secretary of Commerce, the metric system of measurement in Federal Government procurements, grants, and other business-related activities. Other business-related activities include all use of measurement units in agency programs and functions related to trade, industry and commerce.

(1) Metric usage shall not be required to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms.

(2) Heads of departments and agencies shall establish an effective process for a policy-level and program-level review of proposed exceptions to metric usage. Appropriate information about exceptions granted shall be included in the agency annual report along with recommendations for actions to enable future metric usage.

(b) Seek out ways to increase understanding of the metric system of measurement through educational information and guidance, and in government publications. The transition to use of metric units in government publications should be made as publications are revised on normal schedules or new publications are developed, or as metric publications are required in support of metric usage pursuant to paragraph (a) of this section.

(c) Seek the appropriate aid, assistance, and cooperation of other affected parties, including other Federal, state, and local agencies and the private sector, in implementing this Order. Appropriate use shall be made of governmental, trade, professional, and private sector metric coordinating groups to secure the maximum benefits of this Order through proper communication among affected sectors.

(d) Formulate metric transition plans for the department or agency which shall incorporate the requirements of the Metric Conversion Act and this Order, and which shall be approved by the department or agency head and be in effect by November 30, 1991. Copies of approved plans shall be forwarded to the Secretary of Commerce. Such metric transition plans shall specify, among other things:

(1) the total scope of the metric transition task for that department or agency, including firm dates for all metric accomplishment milestones for the current and subsequent fiscal years;

(2) plans of the department or agency for specific initiatives to enhance cooperation with industry, especially small business, as it voluntarily converts to the metric system, and with all affected parties in undertaking the requirements of paragraph (a) of this section; and

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(3) specific steps and associated schedules through which the department or agency will seek to increase understanding of the metric system through educational information and guidance, and in department or agency publications.

(e) Designate a senior level official as the Metric Executive for the department or agency to assist the head of each Executive department or agency in implementing this Order. The responsibilities of the Metric Executive shall include, but not be limited to:

(1) acting as the department's or agency's policy-level representative to the ICMP, and as a liaison with other government agencies and private sector groups;

(2) management oversight of department or agency outreach and response to inquiries and questions from affected parties during the transition to metric system usage; and

(3) management oversight of preparation of the department's or agency's metric transition plans and progress reports, including the Annual Metric Report required by 15 U.S.C. 205j and OMB Circular A-11.

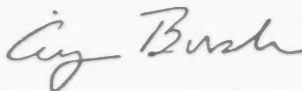
(4) preparation by June 30, 1992, of an assessment of agency progress and problems, together with recommendations for steps to assure successful implementation of the Metric Conversion Act. The assessment and recommendations shall be approved by the head of the department or agency and provided to the Secretary by June 30, 1992, for inclusion in the Secretary's October 1, 1992, report on implementation of this Order.

Sec. 3. Application of Resources.

The head of each Executive department and agency shall be responsible for implementing and applying the necessary resources to accomplish the goals set forth in the Metric Conversion Act and this Order.

Sec. 4. Judicial Review.

This Order is intended only to improve the internal management of the Executive Branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers or any other person.



THE WHITE HOUSE
July 25, 1991





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Metric Conversion Activities of
Federal Government Agencies in
Compliance with P.L. 100-418,
Section 5164, Metric Usage

Prepared for the
House Committee on Science, Space, and Technology
Subcommittee on Technology and Competitiveness

Edith Fairman Cooper
Analyst in Social Science
Science Policy Research Division
September 12, 1991

(IX)



**METRIC CONVERSION ACTIVITIES OF FEDERAL
GOVERNMENT AGENCIES IN COMPLIANCE WITH
P.L. 100-418, SECTION 5164, METRIC USAGE**

SUMMARY

The passage of the Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) included an amendment to the Metric Conversion Act of 1975 (P.L. 94-168) added as section 5164, Metric Usage. This section declares that the policy of the Nation is to designate the metric system as the preferred system of measurement for trade and commerce, and requires each Federal agency to use metric units in all or as many of its procurements, grants, and other business-related transactions as is economically feasible by the end of fiscal year 1992. The amendment also calls for each Federal Government agency to report to Congress, through their annual budget submissions, actions taken in the previous fiscal year and plans for the current fiscal year to carry out the mandate.

This report compiles and analyzes the annual metric progress reports submitted to Congress by each appropriate agency¹ in compliance with the mandate. Out of 32 appropriate agencies contacted by the Office of Metric Programs, 25 responded. Of the agencies responding, only nine seem to be totally complying with the law in all areas required.

Nineteen agencies have developed or are developing guidelines for metric transition in accordance with the mandate. Seventeen agencies have established metric transition plans, but only thirteen have set time frames to assess conversion progress. Ten indicated that the September 30, 1992 deadline could be met. Fifteen have active metric education and/or training programs underway, or are planning to do so in order to increase the understanding of the metric system for staff and private sector business associates. All agencies reported FY 1990 actions and accomplishments, 23 indicated FY 1991 plans, but only 13 reported FY 1992 proposals.

¹This report is defining as "appropriate" agencies, all Federal Government agencies that are members of the Interagency Council on Metric Policy, and those that have business-related activities for which metric conversion seems feasible. Forty-two agencies were contacted by the Office of Metric Programs. Ten of these agencies (see appendix A, below) that do not necessarily use forms of measurement in their business-related activities, or that have already converted to the metric system, or are not considered to be Federal Government agencies (as defined in the U.S. Code, section 105 of title 5) are not included in this report.

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METRIC CONVERSION ACTIVITIES OF FEDERAL GOVERNMENT AGENCIES IN COMPLIANCE WITH P.L. 100-418, SECTION 5164, METRIC USAGE

INTRODUCTION

This report provides a summary and analysis of Annual Metric Progress Reports, submitted by Federal agencies, to the Congress, through the Department of Commerce Office of Metric Programs. The apparent compliance or non-compliance by each agency with the Metric Usage mandate (Section 5164) stipulated in the Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) is noted. Capsulized versions of the reports appear in appendix B listing the actions and plans of each agency (to meet the September 30, 1992 deadline as mandated) by the fiscal years involved, 1990, 1991, and 1992 (by some).

Two agencies, the Department of Commerce (DOC) and the General Services Administration (GSA), whose metric reports are summarized in this report, have metric conversion responsibilities that go beyond the other agencies and have a direct impact upon the metric conversion activities of other agencies. The DOC is responsible for coordinating the overall Federal Government metric transition process and for guiding other agencies in converting to the metric system. The GSA affects metric conversion through the issue of schedules and standards for many Government-wide procurement activities.

Tables are presented at the end of the report which summarize each agency's plans and give succinct pictures of the current status of their progress in converting to the metric system of weights and measures.

THE OMNIBUS TRADE AND COMPETITIVENESS ACT OF 1988 (P.L. 100-418) REQUIREMENTS FOR METRIC USAGE

Section 5164, Metric Usage, of the Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) gives the following directives for metric conversion by Federal Government agencies:

(1)

1. Establish guidelines² to carry-out policy to use metric in procurements, grants, and other business-related activities; provide ways the agency plans to increase understanding of the metric system; and permit the continued use of traditional systems of weights and measures in nonbusiness activities;
2. Include in annual budget submissions:
 - (a) Actions taken during FY 1990 (the previous budget year) to implement the policy; and
 - (b) Actions the agency plans to take in FY 1991 (the current budget year) and FY 1992 (the budget year under discussion) to fully implement the metric system.

SYNOPSIS OF ANNUAL METRIC PROGRESS REPORTS BY EACH APPROPRIATE AGENCY

Department of Agriculture (USDA)

The USDA is actively complying with the Metric Usage mandate and plans to meet the September 30, 1992 deadline. During FY 1990, guidelines for implementation in the form of Departmental Regulations (DR) were established. A Metrication Steering Committee was formed to identify barriers that might impede conversion, and a Management by Objective statement for implementation was developed to ensure that the timetable in the Act will be met. Three USDA divisions are performing work in metric units and have metric data bases--the Economic Research Services's Agriculture and Trade Analysis Division, the Commodity Economic Division, and the Packers and Stockyards Division. The Human Nutrition Information Service publishes all reports, graphs, and food consumption tables in metric.

In FY 1991, the DR will be issued, and FY 1990 actions will be continued. Also, USDA agencies will identify activities to be converted to metric, prepare action plans and milestones to comply with the DR, and provide appropriate training for staff to better understand the metric system. All of these activities will continue in FY 1992.

USDA appears to be meeting the requirements of the mandate.

Department of Commerce (DOC)

The DOC assists and coordinates the overall Federal Government metric transition process. Also, it reaches out to State governments, industry, engineering and standards writing groups, the education community, and the public. During FY 1990, the Interagency Council on Metric Policy (ICMP) met

²The Conference Committee report on P.L. 100-418 suggested that each agency use the Department of Defense guidelines (DOD Directive Number 4120.18, dated September 16, 1987) as a model when creating metric conversion guidelines. A guideline clearly indicates an agency's policy, responsibility, and requirements in reporting metric conversion activities.

twice and produced two products to guide the Federal agencies in metric conversion. The Metric Operating Committee (MOC) met four times and, with each of its functioning subcommittees, worked to implement metric transition in the areas of construction, consumer concerns, Federal employee training, health care, procurement and supply, and standards and metric practice.³ The work of the three additional subcommittees--Public Education and Awareness, Small Business Assistance, and Transportation--was not mentioned.

As far as it could be determined from DOC's report, DOC seems to have guidelines for implementing metric transition; however, guidelines are not specifically spelled out in the report. Each DOC operating unit has developed its own metric transition plan and is actively converting to the metric system as is feasible. In so doing, each operating unit has its own unique concerns and in some cases, barriers which it will have to overcome in order to meet the transition deadline. DOC uses its management by objective (MBO) system to plan and keep track of metric progress, but the report does not mention whether the Department, as a whole, will be able to meet the mandated deadline for complete conversion.

All of the FY 1990 activities probably will be continued in FY 1991, as is mentioned in some of the reports of the operating units. DOC, however, does not specifically spell out FY 1991 plans. In addition, DOC does not include FY 1992 proposals. It appears that DOC needs to enhance its effort if it is to meet the requirements of the law.

Department of Defense (DOD)

Efforts to convert to the metric system have been underway at DOD since its Metric Transition Plan was signed by the Secretary of Defense in January 1989. The DOD guidelines have been suggested as the model for all Federal Government agencies to follow. Its report states, however, that a high level of coordination is necessary at DOD because the agency has limited ability, unilaterally, to ensure metric conversion except in a few cases.⁴

Many of DOD's metric-based weapon systems and subsystems are "hybrid," i.e., partly metric and partly inch-pound. In addition to its weapon systems, different military branches have purchased significant metric-designed support equipment. Also, during FY 1990, many of the Services and Defense agencies developed metric-based specifications and standards. Using input from industry and the agency's standards community, DOD initiated a program to adopt from

³These seven areas were handled by the seven functioning subcommittees--Construction; Consumer Assistance; Legislation and Regulation; Federal Employee Training; Health Care; Procurement and Supply; and Standards and Metric Practices.

⁴New military systems and equipment, military unique items, and many military operations are the only areas where DOD can unilaterally require metric. Even in these areas, non-metric units will continue to be used when using metric measurements are neither reasonable nor practical.

non-Government sources, metric standards and specifications already identified as needed to support metric-based weapon systems and support equipment.

Currently, DOD trains individuals who need a working knowledge of the metric system to carry out their job performance. This effort will be expanded as agency uses of the metric system increase. Along with participating Federal metrication activities, DOD works closely with private sector metric transition planning organizations.

The Department's report does not include FY 1992 proposals, and has not established timetables to assess its progress in meeting the FY 1992 deadline. DOD does not seem to be in full compliance with the mandate.

Department of Education

The Department of Education listed FY 1990 activities pursuant to the mandate, and stated that Department policy (guidelines) for metric transition, an implementation plan, and timetables would be established. The report states that the agency plans to pursue strategies to encourage metric education in the Nation's schools, but it does not indicate specifically when or how this will be done.

Plans and/or proposals for FY 1991 or FY 1992 are not indicated. Neither does the report stipulate whether meeting the mandated deadline seems feasible. The Department does not appear to be complying with the requirements of the mandate.

Department of Energy (DOE)

The DOE is actively pursuing metric conversion. The DOE Order 5900.2, *Use of the Metric System of Measurement*, provides implementing guidelines required by the law. Its Metric Transition Plan was developed and approved during FY 1990. Thirteen Task Areas identified in the plan will be initiated in FY 1991 to provide the basis for creating policy and procedures to convert to metrics.

The report mentions that a management information and reporting system will be developed in FY 1991 to assess DOE's progress in converting. Also, during FY 1992, its Metric Transition Committee plans to set a date when conversion will be completed. An education and training program will be developed, and a Metrication Handbook will be published to increase personnel and contractor understanding of the metric system. Also, the DOE Office of Public Affairs plans to issue guidance concerning the use of the metric system in its public affairs releases and publications.

DOE appears to be meeting the requirements of the law in all areas.

Department of Health and Human Services (DHHS)

In compliance with the mandate, DHHS has developed a metric transition policy (guidelines). The departmental metric transition policy, which will be implemented in FY 1991, has timetables set for the completion of various metric conversion activities.

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), Food and Drug Administration (FDA), and the National Institutes of Health (NIH) are developing ways to educate staff about metric usage. Also, ADAMHA will make sure that the metric policy is known and incorporated into all ADAMHA transactions. The agency has set the end of FY 1992, as mandated, to complete conversion. DHHS is fully complying with the law.

Department of Housing and Urban Development (HUD)

This Department did not provide its annual metric conversion report for Congress as requested. It did, however, provide a written report for the Subcommittee on Science, Research and Technology at its April 24, 1990 hearing assessing Federal Government progress toward metric conversion. Notwithstanding, HUD apparently has not complied with the mandate.

Department of the Interior

The Interior Department is actively making a metric transition. In FY 1990, the Department's existing metric policy was reviewed and extensively updated. The Interior Metric Work Group (IMWG) (organized to address metric transition issues) developed a draft departmental metric transition plan.

Each Bureau and office will create its own metric conversion plan during FY 1991. The report indicates that by the end of FY 1991, the Fish and Wildlife Service's waterfowl survey data will be completely converted to metric. The agency and its IMWG will monitor progress and achievements of each bureau and office toward conversion, but the report does not indicate whether the agency will be able to meet the mandated deadline. Briefings have been and will be given to inform the staff about the metric system. Proposals for actions in FY 1992 are provided. Compliance with the law appears evident in all areas.

Department of Justice

This agency did not provide its annual metric conversion report to Congress as requested. Although it did provide a written report for the House Subcommittee on Science, Research and Technology at its April 24, 1990 hearing to assess Federal Government progress toward metric conversion, it apparently has not complied with the mandate.

Department of Labor (DOL)

The organizational units within the Department that will have the most impact on the private sector when converting to the metric system are the Mine Safety and Health Administration (MSHA), the Occupational Safety and Health Administration (OSHA), the Employment and Training Administration's Job Corps, and the Bureau of Apprenticeship and Training (BAT).

In FY 1990, the MSHA developed a specific metric conversion plan for its bureau that was combined and coordinated into one extensive plan for the Department. The Job Corps was alerted to require all Job Corp Centers to examine ways to develop supplements to its education and training program in order to gradually implement metric conversion by the FY 1992 deadline. The BAT reminded its Regional Directors of a proposed Executive Order regarding metric conversion and of the desirability of Bureau program sponsors to consider incorporating the metric system into their related instruction curriculum as appropriate.

In FY 1991, each departmental organization that has not done so, will develop individual metric transition plans. Some of the proposals for FY 1992 are that other departmental organizations will integrate metric instruction into their basic training materials, research the impact of conversion on existing regulations and requirements, and make necessary metric revisions to policy, procedure, and regulation documents.

Although MSHA's progress toward conversion will be monitored quarterly under its transition plan, the report does not mention Department-wide time frames to monitor overall transition progress to determine whether the FY 1992 deadline is feasible. The report does not mention the development of guidelines, and therefore, apparently is not fully complying with mandate requirements.

Department of State

In FY 1990, the Department issued its metric policy guidelines which outline procedures and responsibilities of all organizational components. In FY 1991, a training plan will be finalized so that all program personnel will receive metric training by October 1, 1991. In FY 1992, costs and benefits associated with training methods will be reviewed and identified.

The Department appears to be complying with the law, but the report does not indicate whether activities are being closely monitored to determine whether conversion can be accomplished by the mandated deadline.

Department of Transportation (DOT)

The DOT report states that, in May 1990, departmental policy and administrative procedures were created for an orderly transition to the metric system. Metric conversion activities for FY 1990, FY 1991, or FY 1992 were not clearly spelled out in the report. Therefore, the FY 1990 actions and FY 1991 plans (presented in appendix B below) have been surmised from the information that was provided.

No programs were mentioned that would provide staff with a better understanding of the metric system. No timetables to monitor progress toward conversion were mentioned, nor was it stated whether the deadline for conversion could be met. Therefore, DOT does not seem to be totally complying with the mandate.

Department of the Treasury

Each individual Bureau within the Department is developing its own metric transition plans and activities. In FY 1991, a Treasury Directive will be completed setting forth the Departmental guidelines stating the policy, responsibilities, and procedures for metric usage. Training and education programs to enhance employee understanding of the metric system are evident throughout the Department.

The report does not provide FY 1992 proposals, nor are ways of monitoring progress toward conversion mentioned to determine whether the required deadline can be achieved. The Department is actively converting to the metric system, but may not be in total compliance with the law.

Department of Veterans Affairs (VA)

The VA has been active in converting to the metric system since the Metric Conversion Act of 1975 was passed. Currently, the agency is striving to meet the recent mandate. Although the VA's report does not separately stipulate FY 1990 and FY 1991 actions, it does mention that the information provided refers to progress made toward converting to the metric system during FY 1990 and the first two quarters of FY 1991.

The agency anticipates its guidelines, transition plan, and policies to be published during FY 1991. A VA metric task group will be established to identify barriers, time frames, milestones, and other actions necessary to complete metric conversion. The agency plans to implement conversion by the specified September 30, 1992 mandated deadline, but barriers in its construction program might hinder meeting this goal by that date or in the near future. Conversion in this area may never be feasible, the report states, unless the private construction industry also converts. The VA Training Division provided registration information to training representatives about the General Services Administration's (GSA) metric training programs.

FY 1992 proposals are not mentioned. Therefore, the VA does not appear to be totally complying with the law.

Administrative Conference of the United States

The Administrative Conference, an independent Federal agency, reports that no achievements or actions toward metrication occurred during FY 1990. For FY 1991, the agency plans to review thoroughly the rules and regulations of the metric mandate, inform employees about complying with the Act, and send a representative to take the course on converting to the metric system offered by the General Services Administration. In FY 1992, the agency plans to continue implementing the Act.

The agency's report does not mention establishing guidelines for metric conversion, nor the creation of a transition plan. Also, it does not stipulate whether time frames have been established to determine whether the mandated deadline might be met. Therefore, the agency does not appear to be meeting the total requirements of the law.

Central Intelligence Agency (CIA)

The CIA is actively converting to the metric system. In FY 1990, a task force was established to identify measurement-sensitive policies and procedures throughout the organization (guidelines). A Metric Transition Plan will be completed during FY 1991. Also, target dates will be set for achieving metric milestones.

Educational information and guidance to increase employee understanding of the metric system will be produced in CIA publications in FY 1991. The CIA anticipates that metric transition will be completed by FY 1992, but it might be necessary to extend such efforts beyond that date. The agency appears to be meeting all the requirements of the law.

Environmental Protection Agency (EPA)

The EPA did not provide its annual metric conversion report to Congress as requested. A written report was provided for the House Subcommittee on Science, Research, and Technology at its April 24, 1990 hearing to assess Federal Government progress toward metric conversion. The agency, however, apparently has not complied with the mandate.

Export-Import Bank

The Export-Import Bank did not provide its annual metric conversion report to Congress as requested. In addition, the agency did not provide a written response for the Subcommittee on Science, Research and Technology at its April 24, 1990 hearing to assess Federal Government progress toward metric conversion. Therefore, it appears that the agency has not adhered to the mandate to convert to the metric system in any manner.

Federal Communications Commission (FCC)

The FCC stated in a written report presented to the Subcommittee on Science, Research and Technology at its April 24, 1990 hearing that it began converting to the metric system in 1976 and has completed conversion. Therefore, a proposed plan for conversion was not included in its budget request. The FCC did not provide an annual metric conversion progress report perhaps for the same reason. Although the agency is reported to be completely converted to the metric system, it did not respond to the request for a report.

Federal Emergency Management Agency (FEMA)

FEMA plans to complete metric transition by the mandated deadline. The agency's report, however, does not mention the development of guidelines that will spell out the policies and procedures that will be followed to accomplish

metric conversion. A metric transition plan of action, however, will be initiated in FY 1991.

FEMA does not provide FY 1992 proposals, nor stipulate target dates to assess its progress towards meeting the mandated deadline. In addition, the agency has not established ways to educate its staff to better understand the metric system. Currently, total compliance with the law is not evident.

Federal Trade Commission (FTC)

The FTC is actively pursuing metric conversion activities and has made plans to continue during all fiscal years involved. A time frame for assessing conversion progress has not been established; nor have guidelines or a metric transition plan. FTC procurement activities, however, are governed by the GSA schedules and standards. FTC purchases will be metric by 1992 to the extent that the GSA has complied with metric conversion. The Commission does not make grants or engage in other business-related activities that might involve metrics.

FTC seems to be complying with the law to the extent that it is possible for it to do so. With the absence of the guidelines and a metrication plan, however, the Commission may not fulfill the mandate.

General Services Administration (GSA)

The GSA is actively converting to the metric system. Agency guidelines were developed through its Metric Steering Group in FY 1990, along with a Metric Transition Plan. Seven action plans have been developed out of eight tasks identified by the GSA Metric Steering Committee and embodied in its metric transition plan listing required activities and milestone dates for metric conversion. Training courses have been developed to educate personnel and will be presented at eight scheduled sessions across the country to benefit other Federal employees.

As far as it can be ascertained by its report, GSA does seem to be on a schedule to complete conversion, but the agency does not specifically indicate if it will be able to meet the FY 1992 deadline. In general, compliance with the law, however, appears to be evident.

Government Printing Office (GPO)

The GPO is converting to metric usage and plans to complete transition by the specified time. Department guidelines are not mentioned in the report.⁶

⁶The March 1990 GAO report on metric conversion (U.S. General Accounting Office. Metric Conversion Plans, Progress, and Problems in the Federal Government. Report to the Chairman, Committee on Science, Space, and Technology, House of Representatives. GAO/RCED-90-131, March 1990. Washington. 45 p.) mentions that GPO has completed guidelines that conform to the DOD model as recommended by the P.L. 100-418 Conference report.

Details about the metric conversion plan, which will identify several key tasks, organizational responsibilities, and a comprehensive schedule for conversion will be available during FY 1991 .

The agency does not provide proposals for FY 1992, nor does it indicate that education and/or training efforts are underway for a better understanding of the metric system. Therefore, total compliance with the law is not obvious.

Interstate Commerce Commission (ICC)

The ICC did not provide its annual metric conversion report to Congress as requested. Although, it did provide a written report for the Subcommittee on Science, Research and Technology at its April 24, 1990 hearings to assess Federal Government progress toward metric conversion, it does not appear to have responded to the mandate.

National Aeronautics and Space Administration (NASA)

In FY 1990, NASA issued a metric policy (guidelines) and a preliminary metric transition plan. The agency's policy clearly establishes the metric system as the preferred system of units for NASA programs, although some exceptions will be necessary. Also, the policy encourages positive steps to guarantee support of new metric hardware by existing systems. The Space Shuttle, however, one of the agency's current capital assets, was built using the inch-pound system and must be maintained with this system.

NASA's overall pace in making the transition depends on the rate in which the metric system is incorporated as the baseline measurement system for major flight programs. During FY 1990, transition plans were initiated by major NASA program offices--the Office of Space Flight, the Office of Aeronautics, Exploration and Technology, and the Office of Space Operations. A long-term plan for each is complicated by such reasons as (1) existing commitments to major inch-pound capital assets, such as the Space Shuttle (mentioned above) and Space Station; (2) use of the customary inch-pound system of units by the community using the technology, such as commercial aviation; or (3) a lack of a supply of metric sources for commercial items for which NASA is not a dominating customer, such as facility construction (an area hampered by the general reluctance of the construction industry to convert to metrics) or ground support equipment.

NASA has established preliminary target dates for planning transition, and states that it will be able to determine when conversion is possible by late 1992. FY 1992 proposals were not mentioned, however, nor were educational and/or training programs for ways to increase the understanding of the metric system. Therefore, total compliance with the law is not apparent.

National Science Foundation (NSF)

NSF is involved in metric transition and plans to complete its tasks (listed below in appendix B) by the end of FY 1991. In FY 1990, a NSF Metric

Committee was developed to create and propose policies and procedures for implementation. The report indicates that the Foundation plans to fully implement the metric system but does not mention any detailed plans or time frames regarding how this will be accomplished.

FY 1992 proposals are not presented, nor are education and/or training programs for a better understanding of the system mentioned. Therefore, total compliance with the law is not apparent.

Nuclear Regulatory Commission (NRC)

The NRC report states that the Commission is committed to metric conversion. It states that in FY 1990, it continued its commitment through staff efforts to develop a draft metrication policy to implement the provisions of the mandate. In FY 1991, the metrication policy statement would be issued.

The report, however, does not provide proposals for FY 1992. It does not provide a schedule to ensure completion of metric conversion by the mandated target date, nor ways to increase understanding of the metric system within the Commission. Total compliance with the law appears to be lacking.

Office of Personnel Management (OPM)

In FY 1990, OPM developed a draft metric policy statement (guidelines) and a transition plan for fully implementing that policy by October 1991. In FY 1991, the policy and plan will be issued. Also, OPM is developing a plan and schedule for making changes in rules, regulations, and publications to comply with the agency's metric policy. In addition, the agency will identify and train appropriate employees in using the metric system.

In FY 1992, the previous fiscal year's activities will be continued. The agency did not give a time frame for conversion, nor did it indicate whether the FY 1992 deadline for completion will be met. OPM seems, however, to be in full compliance with the law.

Small Business Administration (SBA)

SBA is pursuing the metric mandate, and in FY 1990, developed and adopted its Metrication Action Plan. The plan outlined five tasks that, when completed, would lead the agency into total conversion to the metric system and increase the number of small business firms with metric capabilities.

During FY 1991, an agency-wide metric coordinator will be formally designated, and the agency's metric guidelines will be issued. SBA plans to meet the required deadline for metric conversion, and will monitor its efforts through keeping track of various milestones that have been set. Although the SBA report does not specifically indicate the fiscal year its plans will be addressed and achieved, it has goals to provide a metrication education and training program; establish its agency-wide guidelines to ensure the mandate is met; and provide Federal leadership to both public and private sectors to advocate and

guide metric conversion to help reduce any negative effects the transition might have on small businesses.

FY 1992 proposals were not mentioned. Therefore, the agency does not seem to be totally fulfilling the requirements of the law.

Tennessee Valley Authority (TVA)

The TVA did not submit its annual metric conversion report to Congress as requested. In addition, it did not respond with a written report for the Subcommittee on Science, Research and Technology at its April 24, 1990 hearing to assess Federal Government progress toward converting to the metric system. Therefore, TVA apparently has not complied with the mandate for metric conversion.

U.S. Consumer Product Safety Commission (U.S. CPSC)

The Consumer Product Safety Commission has been implementing the metric system since its inception in 1973. All metric-sensitive regulations issued by the Commission contain some form of metric units. This procedure will be continued in future regulations, publications and procurements. It is a relatively small agency and many of its supplies are purchased through the GSA.

In compliance with the law, U.S. CPSC plans to create internal policies and procedures (guidelines) for internal use during early FY 1991. In FY 1992, it plans to provide training for employees and implement the guidelines. The Commission expects to meet the mandated FY 1992 deadline for conversion through a schedule that is consistent with the law.

U.S. CPSC's report does not specifically indicate FY 1990 activities, but it does mention its continued liaison with the DOC's Interagency Committee on Metric Policy and the Metrication Operating Committee. Therefore, this report assumes that these activities occurred during FY 1990, and will count these as FY 1990 actions. Although the report does not mention creating a transition plan, it appears that the Commission is fulfilling the mandate as far as it is possible.

U.S. International Trade Commission (U.S. ITC)

In FY 1990, U.S. ITC issued its guidelines regarding the use of the metric system. Commission procurement activities, however, are conducted from GSA schedules and through GPO. In FY 1991, the Commission intends to expand its use of metric measurements when purchasing goods and services as opportunities arise. In FY 1991 and 1992, it plans to emphasize use of metric units as much as possible in questionnaires and analytical reports.

Although U.S. ITC plans to meet the goals set by Congress for metric transition, its report, does not mention any time frame that has been established in order to fully comply with the law by FY 1992. Neither does the report mention any methods that will be initiated to assist U.S. ITC staff in better understanding the metric system. The Commission does not seem to be totally complying with the mandate.

Implementation of P.L. 100-418, Section 5164, Metric Usage:
Appropriate Agencies Reporting*

AGENCY	Guidelines Created	FY 1990 Actions	FY 1991 Plans	FY 1992 Proposals	Suggested Completion Date	Metric Educ. and/or Training Planned or Underway
USDA	x	x	x	x	Sept. 30, 1992	x
DOC		x			None	x
DOD	x	x	x		None	x
Education	x	x			None	
DOE	x	x	x	x	To be identified in FY 1992	
DHHS		x	x	x	Sept. 30, 1992	x
Interior	x	x	x	x	None	x
Labor		x	x	x	None	x
State	x	x	x	x	None	x
DOT	x	x	x		None	
Treasury	x	x	x		None	x
VA	x	x	x		Sept. 30, 1992	x
Admin. Conference			x	x	None	x
CIA	x	x	x	x	FY 1992 and beyond, if required	x
FEMA		x	x		Sept. 30, 1992	
FTC		x	x	x	Sept. 30, 1992, if feasible	
GSA	x	x	x	x	None	x

continued

Implementation of P.L. 100-418, Section 5164, Metric Usage: Appropriate Agencies Reporting*						
AGENCY	Guidelines Created	FY 1990 Actions	FY 1991 Plans	FY 1992 Proposals	Suggested Completion Date	Metric Educ. and/or Training Planned or Underway
GPO	x ⁶	x	x		Sept. 30, 1992	
NASA	x	x	x		To be identified in late FY 1992	
NSF	x	x	x		None	
NRC	x	x	x		None	
OPM	x	x	x	x	Sept. 30, 1992	x
SBA	x	x	x		Sept. 30, 1992	x
U.S. CPSC	x	x	x	x	Sept. 30, 1992	x
U.S. ITC	x	x	x	x	None	
* The "x" means "yes" the agency is complying with the law in the areas indicated.						

FINDINGS AND OPTIONS

A timely, across-the-board transition to the metric system by all appropriate Federal Government agencies by the September 30, 1992 deadline does not seem probable at this time. Out of 32 appropriate agencies contacted by the Office of Metric Programs, 25 responded by the April 15, 1991 deadline. Since the March 1990 GAO report (previously cited, see footnote 5) was issued, the majority of appropriate agencies are showing more commitment toward metric conversion, but not all are fully complying with the metric usage mandate. In fact, only nine agencies appear to be totally complying with the law in all areas required.

Nineteen indicate that they have created or are creating guidelines for metric conversion. GPO, however, does not mention guidelines in its report but

⁶As mentioned above, according to the GAO report on metric conversion, GPO has guidelines that conform to the DOD model.

does indeed have them, according to the GAO report. This discrepancy may mean that other agencies, such as DOC and the Department of Labor, might also have guidelines but failed to mention them in their reports, since they seem to be complying in all other areas.

Seventeen agencies have developed metric transition plans, but only 13 have set time frames to monitor conversion progress, and only 10 indicated that the September 30, 1992 deadline could be met. DOE intends to identify its completion date during FY 1992, and NASA will do so in late FY 1992. Fifteen agencies are planning or have underway active metric education and/or training programs to increase the understanding of the system of measurement for their staffs or private sector business associates. All agencies who reported described FY 1990 actions and achievements, (except the Administrative Conference of the United States, which had none), 23 indicated FY 1991 plans, but only 13 revealed FY 1992 proposals.

Since the FY 1992 deadline is approaching and many agencies do not appear close to meeting the deadline, Congress might want to consider using a different method of monitoring agency progress toward conversion. Quarterly assessments might urge agencies toward completing a more timely transition, even if the September 30, 1992 deadline is not met by the majority. Furthermore, whenever reports are submitted, it would probably help if such documents contain clearer and more concise explanations of progress. Some of the agencies, such as the Department of Education, DOT, GPO, NSF, and others, might be accomplishing more toward metric conversion, but their reports do not fully reflect their progress.

**Federal Government Metric Conversion Status:
Responses of 32 "Appropriate" Agencies Contacted**

AGENCY	Apparent Compliance		No Report Provided	Time Frames Provided	Transition Plans Provided
	YES	NO			
USDA	x			x	x
DOC		x		x	x
DOD		x			x
Education		x		x	x
DOE	x			x	x
DHHS	x	x		x	
HUD			x		
Interior	x			x	x
Justice			x		
Labor		x			x
State	x				

continued

**Federal Government Metric Conversion Status:
Responses of 32 "Appropriate" Agencies Contacted**

AGENCY	Apparent Compliance		No Report Provided	Time Frames Provided	Transition Plans Provided
	YES	NO			
DOT		x			x
Treasury		x			x
VA		x		x	x
Admin. Conference		x			
CIA	x			x	x
EPA			x		
Export- Import Bank			x		
FCC			x		
FEMA		x			x
FTC		x			
GSA	x			x	x
GPO		x		x	x
ICC			x		
NASA		x		x	x
NSF		x			
NRC		x			
OPM	x			x	x
SBA		x			x
TVA			x		
U.S. CPSC	x			x	
U.S. ITC		x			

APPENDIX A

LIST OF ALL AGENCIES CONTACTED BY THE OFFICE OF METRIC PROGRAMS FOR ANNUAL METRIC PROGRESS REPORTS TO CONGRESS

1. Department of Agriculture (USDA)
2. Department of Commerce (DOC)
3. Department of Defense (DOD)
4. Department of Education
5. Department of Energy (DOE)
6. Department of Health and Human Services (DHHS)
7. Department of Housing and Urban Development (HUD)
8. Department of the Interior
9. Department of Justice
10. Department of Labor
11. Department of State
12. Department of Transportation (DOT)
13. Department of the Treasury
14. Department of Veterans Affairs (VA)
15. Administrative Conference of the United States
16. Central Intelligence Agency (CIA)
17. Commodity Futures Trading Commission (CFTC)⁷
18. Environmental Protection Agency (EPA)
19. Export-Import Bank
20. Federal Communications Commission (FCC)
21. Federal Emergency Management Agency (FEMA)
22. Federal Maritime Commission⁸
23. Federal Reserve Board⁹
24. Federal Trade Commission (FTC)
25. General Services Administration (GSA)
26. Government Printing Office (GPO)
27. Interstate Commerce Commission (ICC)

⁷Stated in a letter to the Office of Metric Programs that CFTC does not set any standard of measurement that would require conversion to the metric system. As a result, CFTC is not included in this report.

⁸The Federal Maritime Commission stated, in a letter responding to the Office of Metric Programs request for a metric progress report, that because of its limited size and the nature of its purchasing procedures (makes purchases from GSA-approved lists of which GSA would be responsible for the metrication activities of such vendors), it is already in full compliance with the metric conversion requirements of Section 5164 of P.L. 100-418. Therefore, it is not included in this report.

⁹This agency stated in the April 24, 1990, Metric Conversion hearing that it is not an appropriate agency under the executive branch to be covered by the mandate and did not submit a report. It is not included as an "appropriate" agency in this report.

28. Japan-United States Friendship Commission*
29. National Aeronautics and Space Administration (NASA)
30. National Mediation Board*
31. National Science Foundation (NSF)
32. Nuclear Regulatory Commission (NRC)
33. Office of Government Ethics*
34. Office of Personnel Management (OPM)
35. Office of Science and Technology Policy (OSTP)*
36. Office of the U.S. Trade Representative¹⁰ (USTR)
37. Small Business Administration (SBA)
38. Smithsonian Institution**
39. Tennessee Valley Authority (TVA)
40. U.S. Consumer Product Safety Commission (U.S. CPSC)
41. U.S. International Trade Commission (U.S. ITC)
42. U.S. Postal Service**

*Not included in this report because it is not an ICMP member agency.

**Stated in the April 24, 1990, Metric Conversion hearing record that it is not a Federal Government agency and is not covered under the mandate. Therefore, such agencies are not included in this report as "appropriate agencies."

¹⁰This agency stated in the April 24, 1990, Metric Conversion hearing record that its activities do not involve extensive use of any measurement system and is not included in this report as an "appropriate" agency.

APPENDIX B

CONDENSED VERSIONS OF THE ANNUAL METRIC PROGRESS REPORTS BY EACH APPROPRIATE AGENCY SUBMITTING

DEPARTMENT OF AGRICULTURE (USDA)

FY 1990 Actions

1. The USDA participated in the activities of the Interagency Council on Metric Policy (ICMP), the Metrication Operating Committee (MOC), and its appropriate subcommittees.
2. Guidelines for implementation were created as the Departmental Regulations (DR) to establish Department-wide policy and assign responsibilities for transition.
3. The Department created a USDA Metrication Steering Committee to identify barriers that might impede implementation.
4. A draft Management by Objective statement for implementing the metric system throughout the department was developed to ensure that the timetable in the Act will be met.
5. Metric measurements were being used by the Economic Research Service's Agriculture and Trade Analysis Division (ATAD) in virtually all its work; by the Commodity Economic Division in its U.S. Agricultural Trade database; in data published in the U.S. agricultural trade reporting system; and in the Packers and Stockyards Division commodity database.

FY 1991 Plans

The Departmental Regulations will be issued.

Plans for FY 1991 and FY 1992

1. The Metrication Steering Committee will survey each USDA agency for barriers that might impede implementation.
2. Each USDA agency will be required to identify activities to be converted, and prepare plans of action to comply with the DR.
3. Appropriate types of training will be selected in each USDA agency as required.

DEPARTMENT OF COMMERCE (DOC)

The DOC's implementation of the metric usage section of P.L. 100-418 involves:

1. Making the transition through its operating units;
2. Assisting and coordinating the overall Federal Government transition process through the Office of Metric Programs and the Interagency Council on Metric Policy; and
3. Reaching out to state government, industry, engineering and standards writing organizations, the education community, and the public.

The DOC Technology Administration's Office of Metric Programs has the primary metric conversion leadership responsibility, but all operating units are actively involved in their own metric transition programs with mission specific elements. DOC uses its management by objective (MBO) system to plan and track metric progress.

FY 1990 Activities

1. The ICMP, chaired by the Under Secretary for Technology, met twice and produced and approved two products giving guidance to Federal agencies in making the transition to the metric system.¹¹
2. The MOC, chaired by the Director of the Office of Metric Programs, its Steering Group; and subcommittees worked with the Metric Program staff and provided metric policy coordination in the Federal Government (an ongoing activity).
3. The MOC met four times and along with seven of its subcommittees¹²:
 - Worked with national construction related standards groups and developed a five-year metric construction transition plan;
 - Dealt with consumer concerns by identifying Federal laws and regulations that might hinder metric use;

¹¹Two reports--*Metric Conversion Policy for Federal Agencies* (Code of Federal Regulations, (15 CFR Part 19 Subpart B) Update published as final rule on January 2, 1991; and *Recommendations for Government Implementation of National Metric Policy*, updated to reflect new metric policy and reviewed by the MOC in January 1991--were produced by the ICMP, the MOC and its subcommittees, with the assistance of the Office of Metric Programs.

¹²The subcommittees included Construction; Consumer Assistance; Legislation and Regulation; Federal Employee Training; Health Care; Procurement and Supply; and Standards and Metric Practices.

--Made proposals to enhance Federal employee training in the metric system, suggesting that the General Services Administration continue to be the lead agency for conducting interagency training;

--Encouraged the expansion of the use of metric units in health care in relevant areas in the Department of Veterans Affairs and DOD, and the possibility of these agencies sharing procurements together and with DHHS;

--Developed metric texts in procurement and supply; and

--Reviewed a particular Federal standard for currency and applicability to metric practices.

DOC FY 1990 metric activities of each operating unit were provided.

DEPARTMENT OF DEFENSE (DOD)

In January 1989, the Secretary of Defense signed the DOD Metric Transition Plan to manage DOD transition efforts in selected areas. As the Department progresses toward metrication, more details will be added to the plan, tasks modified, and new goals incorporated.

FY 1990 Actions

1. Each Military Service Branch identified viable candidates for conversion in its inch-pound weapon system programs that are still in the demonstration/validation phase and several years away from detailed design and production.
2. Through several surveys, metric specifications and standards required to support metric weapon systems were identified by the Army, Navy, and Defense Logistics Agency (DLA).
3. DOD worked closely with and participated in the activities of the Department of Commerce's ICMP.
4. The Navy Medical Stores procured some medical supplies and stores; and the Naval Medical Command procured basically all of its laboratory and test equipment in metric or with metric readouts.
5. The Marine Corp procured shop, laboratory, test equipment in metrics, especially for depot-level maintenance activities.
6. The Army, Navy, and the Defense Logistics Agency instituted metric education and training procedures. The Air Force effort is being planned.

FY 1991 Plans

1. The Army will continue to emphasize metric conversion of material systems and subsystems.

2. The Naval Sea Systems Command plans to:

--Purchase five different classes of yard and service craft that will be constructed in metric measurements; and

--Conduct feasibility studies of an LX ship design to examine new designs versus existing designs applicable to the LX. If a new design alternative is chosen, the Naval Sea Systems Command plans to use the metric system in its design and construction.

3. The Naval Air Systems Command plans to procure the Shore-based Arresting Gear System M-29, as a non-developmental item (NDI) procurement, and has issued an RFP for acquisition of the system in either metric or inch-pound units.

4. The Marine Corps plans to procure Distance Measuring Equipment for support of survey sets. All instruments will have dual metric and inch-pound capability.

DEPARTMENT OF EDUCATION

FY 1990 Actions

1. Representatives from the Department regularly participated on the Department of Commerce's ICMP and the MOC.

2. The Assistant Secretary for Elementary and Secondary Education testified at hearings before the House Committee on Science, Space and Technology's Subcommittee on Science, Research and Technology about the status of the Department's metric conversion activities.

3. The Department created a Metric Task Force to develop suggestions for the Secretary for future metric conversion actions.

4. The Department established a permanent Departmental Metric Coordinating Committee, chaired by the Assistant Secretary for Elementary and Secondary Education, to develop additional instructions concerning metric policy, implementation plans, and timetables.

DEPARTMENT OF ENERGY (DOE)

FY 1990 Actions

1. The Under Secretary approved a charter describing the roles, responsibilities, authority, and overall purpose for the Metric Transition Committee that was established in FY 1989.

2. The Metric Transition Committee held two meetings to develop the DOE Metric Transition Plan.

3. A subcommittee was formed that developed a draft of the DOE Metric Transition Plan which was presented to the Committee for approval.
4. The Department appointed a Metric Coordinator to manage the DOE metric transition program.
5. DOE program and field office personnel were assigned to develop specific task areas in the Metric Transition Plan.
6. DOE completed and approved the Metric Transition Plan.
7. The Department initiated the Metric Transition Plan to be submitted to the Federal Register for public notification.
8. The office of the Superconducting Super Collider formally decided to build the scientific portion of the project in metric units. The project will serve as the Department's model for metric procurement.
9. Senior management-level personnel regularly participated on the Department of Commerce's MOC and voluntarily took part in the MOC Steering Group. Field and program office personnel also were assigned to participate on appropriate MOC subcommittees.

FY 1991 Plans

1. The Department plans to publish the Metric Transition Plan in the Federal Register notifying other Federal agencies, State governments, prospective contractors and vendors of its plans to convert to the metric system.
2. Thirteen Task Areas identified in the Metric Transition Plan will be developed and initiated to provide the basis for creating policy and procedures for converting to the metric system.
3. The Office of Public Affairs will begin issuing guidance concerning the use of the metric system through public affairs releases and publications as the primary measurement system to be employed in such releases and publications.
4. DOE will continue to participate actively on the MOC and the ICMP and on the MOC Steering Group. Such participation will significantly increase as a result of DOE personnel taking part on these subcommittees.
5. The DOE Metric Transition Committee is expected to meet several times to discuss the progress of metric conversion and the development of the Task Area Plans of the Metric Transition Plan.
6. Several large-scale projects are expected to be evaluated to determine the feasibility of purchasing them in metric units.
7. Use of the Metric System of Measurement (DOE Order 5900.2) will be updated to include the requirements of the Omnibus Trade and Competitiveness

Act of 1988, and to provide policy and procedures to implement the metric transition in accordance with the law.

8. The Superconducting Super Collider Laboratory is expected to issue procurement requests and contracts for the metric purchases of key scientific components of the project.

9. A DOE management information and reporting system is expected to be developed to monitor the Department's progress toward implementing metric conversion.

FY 1992 Plans

1. The Task Area Plans of the Metric Transition Plan are expected to be completed and approved, therefore enabling the implementing of metric conversion policies and procedures. Program and field offices are expected to apply the Metric Transition Plan to their specific project and operational activities.

2. The Metric Transition Committee will be expected to identify a DOE metric conversion completion date.

3. DOE will continue to take part in the DOC's MOC, the ICMP, the MOC Steering Group, and maintain its extensive participation on the MOC technical subcommittees.

4. Variations to the Metric Transition Plan and the DOE Order 5900.2 (Use of the Metric System of Measurement) are anticipated and expected to reflect the changing environment as the Federal Government moves toward adopting the metric system.

5. Other large-scale projects are expected to be evaluated and considered for metric procurement.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (DHHS)

FY 1990 Actions

1. The Department developed a network of contact points within the DHHS substructure to assist in initiating metric transition.

2. DHHS selected nine employees to represent the Department on seven different subcommittees of the MOC.

3. DHHS conducted a Department-wide survey of each organizational component to identify internal activities where the metric system already is used; opportunities to convert where the system is not presently applied; and indicate activities where metric measurements would not be practical or could cause significant inefficiencies.

4. The Department issued a memorandum to all Food and Drug Administration (FDA) employees directing them to use a dual system of inch-pound and metric measurement in all FDA publications, expressing metric units first.

5. DHHS developed a Departmental metric transition policy.

FY 1991 Plans

1. The Department will establish a Public Health Service (PHS) advisory group of health care professionals to identify specific steps to be taken to increase the use of metric products in PHS health care activities.

2. DHHS will implement a Department-wide metric transition policy.

3. The Department plans to formally establish a DHHS Metric Transition Steering Committee as directed in the Departmental policy issuance within 90 days after dispatching the metric transition policy.

4. The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) will organize special displays to enhance metric awareness and educate the staff in using the metric system.

5. ADAMHA will ensure that the metric transition policy is known and incorporated into all ADAMHA transactions.

6. The FDA Staff Manual Guide will be revised to include provisions for using metric measurements in preparing Statements of Work.

7. The National Institutes of Health (NIH) is developing a training exercise to inform employees of each Institute, Center, and Division of the Omnibus Trade and Competitiveness Act. Laboratory chiefs will be asked to seek vendors who offer metric equivalents for items presently purchased in inch-pound units. In addition, the NIH Standards and Specifications Branch staff will advise all ordering officials of inch-pound items when metric substitutes can be located.

FY 1992 Plans

1. The FDA's Center for Food Safety and Applied Nutrition plans to issue a new booklet entitled, *A Food Labeling Guide*, which has been revised to encourage the increasing use of the metric system. Over 2,500 copies of the guide will be distributed to industry in 1991 and 1992.

2. The NIH Standards and Specifications Branch will draft and include a metric equivalency clause in requests deemed appropriate for goods and services purchased by the NIH Division of Procurement.

3. The Department plans to be in full compliance with the Metric Conversion Act of 1975, as amended, by the end of FY 1992.

DEPARTMENT OF THE INTERIOR

FY 1990 Actions

1. An Interior Metric Work Group (IMWG) was organized to address metric transition issues.
2. The IMWG developed the draft Departmental Metric Transition Plan.
3. The existing metric policy was reviewed, extensively revised, and a new policy drafted.
4. Two briefings were given to educate and inform staff -- Bureau training officers were instructed concerning the Department's metric program, and about specific metric training initiatives for FY 1991; and Bureau of Indian Affairs program officials received metric system briefings.
5. Bureau representatives were selected to work with seven Department of Commerce MOC interagency subcommittees and attend meetings of the active subcommittees.
6. The Department representatives actively participated in the MOC and the ICMP meetings.
7. The Bureau of Mines' Division of Helium Operations created a Metric Conversion Board to guide transition efforts and minimize any potential disruption to helium customers.
8. The Bureau of Mines converted 34 additional reports on mineral commodities to metric units for a total 76 such reports now published in metric measurements.

FY 1991 Plans and/or Activities

1. A metric briefing was presented at the Bureau of Indian Affairs Road Program Manager's Engineering Conference in December 1990.
2. The Department will publish its Metric Transition Plan in the Federal Register for public comment and will work with the bureaus and offices to implement the plan.
3. A revised metric policy will be published in the Departmental Manual.
4. Bureaus and offices will prepare individual metric transition plans.
5. The Department and the IMWG will monitor progress and accomplishments on the individual bureau and office metric transition plans.

6. The Bureau of Reclamation will create and chair a construction subgroup with representatives from other bureaus to resolve metric transition issues impacting the Department's construction activities.
7. The Bureau of Land Management will test and evaluate the feasibility and effects of metric conversion for coal production accounting in Federal coal leases.
8. The Bureau of Mines will convert seven additional reports on mineral commodities to metric measurements.
9. The Minerals Management Service (MMS) will coordinate with the American Petroleum Institute to encourage industry's interest in converting oil and gas leasing and production to the metric system. Also, MMS will coordinate the Department's transition plan and policies concerning oil and gas leasing and production with their contracts.
10. The National Park Service will implement metrics, using dual dimensions in all public information materials--exhibits, brochures, road and trail signs, press releases and other publications, and planning documents.
11. By the end of FY 1991, the Fish and Wildlife Service's waterfowl survey data used in analyzing waterfowl populations will be completely converted to the metric system. Additionally, the Federal Aid Manual will express references to volume, weight, area, and distance in metric units.

FY 1992 Plans

1. The Department will study the feasibility of converting other business-related activities to metric units.
2. The Bureau of Land Management (BLM) will publish a report on the pilot project to evaluate the practicability and effects of converting production accounting in Federal coal leases to metric measurements.
3. The BLM plans to evaluate the feasibility of converting other leasable solid minerals and oil and gas to metric units using information obtained from the coal production accounting pilot project.
4. Oil and gas production reporting will begin using metric measurements.
5. The Bureau of Mines will convert three additional reports on mineral commodities to metric units.
6. The Fish and Wildlife Service will incorporate dual dimensions in revised Endangered Species Act regulations.

DEPARTMENT OF LABOR

FY 1990 Actions

1. The Office of the Job Corps issued a notice (Job Corps Notice No. 90-02) alerting regional and Job Corps Center staffs of the need to convert to the metric system by the end of FY 1992. All Job Corps centers were required to examine ways and methods to develop supplements to the education and training programs to gradually implement the national policy.
2. The Bureau of Apprenticeship and Training forwarded to all its Regional Directors a proposed executive order for metric conversion, and the importance of urging apprenticeship program sponsors to consider including metric units into the related instruction curriculum as appropriate.
3. The Bureau staff met with the Department's metric coordinator and the president of the U.S. Metric Association to discuss progress, plans, and possible coordination of activities.
4. Each Mine Safety and Health Administration organization developed a specific plan that was combined and coordinated into one extensive plan, "MSHA Metric Transition Plan," that has been approved and published.
5. MSHA has also:
 - Assisted the American Mining Congress in the development of an "Industrial Survey on Metrication";
 - Issued an information bulletin to all its employees announcing the "Metrication Transition Plan";
 - Drafted an information bulletin to the mining industry announcing the "Metrication Transition Plan";
 - Identified all parts of Title 30, Code of Federal Regulations, which require conversion to metrics; and
 - Estimated its anticipated costs of metrication for FY 1992, 1993, and 1994.
6. The Occupational Safety and Health Administration (OSHA) continued its long-standing policy of "soft conversion" in regulations and standards.
7. The Department participated fully in meetings of the ICMP and the MOC, circulated summaries of each meeting, and copies of metric issuances of the document throughout its organizations.

FY 1991 Plans

1. The Department will issue a revised Secretary's Order on "Conversion to the Metric System."
2. DOL will continue its full participation in the ICMP and the MOC.
3. Metric matters issued by the Office of Metric Programs and other articles and publications concerning metric conversion will be circulated to appropriate personnel.
4. Other departmental organizations that have not developed metric transition plans will begin to do so.
5. A copy of Preferred Metric Units for General Use by the Federal Government (Federal Standard 376a) will be distributed to appropriate personnel.
6. The results of the American Mining Congress' Industrial Survey on Metric Conversion will be reviewed.
7. MSHA's progress under its Metric Transition Plan will be monitored and documented quarterly.
8. An information bulletin announcing MSHA's Metric Transition Plan will be issued to the mining industry.
9. MSHA will publish a notice in the Federal Register announcing the use of metric measurements in its new rules and regulations.
10. OSHA will continue and MSHA will begin to include equivalent metric units as alternatives for inch-pound measurements in new rules, advance notices of proposed rule making, and as the preferred system for presentations, reports and documentation.
11. The agency will begin evaluating and selecting "off-the-shelf" metric training materials.
12. Selected employees will attend the National Metric Conference.

FY 1992 Plans

1. The appropriate organizations within the Department will continue metric conversion plans to the extent feasible without causing significant harm to private sector businesses, particularly small businesses.
2. Metric instruction will be integrated into basic training materials.
3. Research will be conducted on the impact of metric conversion on existing regulations and requirements.

4. Necessary metric revisions will be made in policy, procedure and regulation documents.
5. Private sector industrial groups will be organized for discussions to aid the department's metric transition.

DEPARTMENT OF STATE

FY 1990 Activities

1. The Office of the Procurement Executive issued the Department's Metric Policy which outlines the procedures, responsibilities, and reporting requirements for all organizational components within the Department.
2. Department representatives serve on the ICMP, the MOC, and on four subcommittees.
3. The Metric Handbook for Federal Officials, including Federal Standard 376a, Preferred Metric Units for General Use by the Federal Government, has been distributed to more than 250 contracting activities worldwide.
4. Department Chiefs and Executive Directors were briefed on the background, current status, and suggestions given that are required to implement metric conversion.

FY 1991 Plans

1. Participation will continue as a member of the ICMP, the MOC, and the four MOC subcommittee memberships.
2. A Technical Metric Reference Library and an International Standards Library will be established.
3. A training plan will be finalized as the Department's metrication practices evolve. All program personnel and contracting officers will receive metric training by October 1, 1991.
4. Effective October 1, 1991, contracting officers will question statements of work/specifications that are not expressed in some form of metric terms or request a waiver.
5. The Office of Administration/Foreign Buildings Operation's (A/FBO's) Design and Engineering Office for Overseas construction will incorporate metric dimensions for design, drawings, and drawing sizes into building criteria documentation, to the extent economically practical. The Department plans to especially emphasize metric conversion in the construction field during FY 1991.

FY 1992 Plans

1. The Department will continue its membership on the ICMP, the MOC, and the four MOC subcommittees.
2. All Department personnel, who has not previously done so, will receive metric training.
3. As a part of the Department's metric training plan, costs and benefits associated with metric training methods will be reviewed and identified.

DEPARTMENT OF TRANSPORTATION (DOT)

FY 1990 Actions

1. DOT established departmental policy and administrative procedures for an orderly transition to the metric system.
2. The Department is developing a DOT order providing instructions for converting to the metric system including creating a Department-wide Metric Coordinating Committee.

FY 1991 Plans

1. An amount of \$15,297,000 from all appropriations in the Office of the Secretary will finance services provided through the Department's working capital fund.¹³

DEPARTMENT OF THE TREASURY

FY 1990 Actions

The Department participated in the DOC Interagency Committee on Metric Policy; the MOC; two MOC subcommittees, and has volunteered to serve on a third subcommittee and possibly a fourth in FY 1991. FY 1990 and 1991 activities were presented for each Bureau within the Department, as follows.

Comptroller of the Currency (OCC)

1. Copies of metrication plans were obtained from other key executive departments to use in developing an OCC plan.
2. Senior management received a briefing concerning planning strategies and specific ways to achieve metric conversion over the next two years. Detailed planning began.

¹³This statement was provided in the DOT report with no further explanation.

3. Agency staff were given two courses--contracting officer's technical representative course, and the statement of work/source selection course--that described requirements for metric conversion.

4. Significant funds were allotted in the FY 1991 budget for orientation, training classes, and materials for agency program staff.

5. User procurement meetings were held during the year to give users informal briefings about converting to the metric system.

U.S. Customs Service (CS)

A Metric Task Force was created composed of logistics, procurement, commercial operations, and legal staff.

Bureau of Engraving and Printing (BEP)

1. BEP issued circular on metric conversion (BEP Circular No. 92-00.7).

2. The standard manufacturing procedures were prepared and updated, using metric measurements.

3. The metric system of measurements was included in the electromachinist training program.

4. Metric units were incorporated in formulating inks that are manufactured or reconstituted at the BEP.

5. Metric units are being included in the acquisition of equipment and materials where applicable.

6. Several activities were continued during FY 1990 that began in FY 1989 involving physical property requirements, buying printing and processing equipment made in metric units, BEP's Office of Design and Engraving's in-house manufacturing of certain products, and the Design Center's use of metric units in currency and in producing stamps.

U.S. Mint (Mint)

1. The Metrication Policy Task Force developed and issued an Operations Policy.

2. The Mint created a Metric Action Task Force to plan and assist with implementing the metric pilot and subsequent conversion processes.

Bureau of the Public Debt (PD)

PD designated a Bureau Metrication Program Officer.

U.S. Savings Bonds Division (SBD)

1. SBD began to include metric specifications on requisitions and purchase orders for all goods and services that required customary units.
2. SBD provided information about metric conversion tables and suggestions to assist staff in adapting to the new requirements.

U.S. Secret Service (USSS)

1. The Secret Service Procurement Division has created a formal policy, defining when it is necessary to use metric units in procurement actions, and requiring periodic reports of metrication program achievements.
2. Information about the 1988 amendments to the Metric Conversion Act of 1975 and the USSS' policy regarding using the metric system were included in the required internal training programs for Contracting Officers' Technical Representatives.

Other Treasury Bureaus

Informal program briefings on metric conversion and Department requirements were held throughout the year for other Treasury Bureaus. Also, all Treasury Bureaus participated in reviewing the draft of Treasury Directive (TD) 75-05, Department of the Treasury Metrication Program.¹⁴

FY 1991 Plans

1. The Department plans to complete a Treasury Directive establishing policy, responsibilities, and procedures for metric usage.
2. A previously formed metric program officers group, consisting of representatives of each Treasury Bureau under the leadership of the Treasury representative to the MOC, will continue to participate actively in the metric transition program.

Comptroller of the Currency

1. The two standard contracting courses--Contracting Officer Representative Training and Statement of Work/Source Selection Training--will be delivered and cite the Federal Metrication Program.
2. Three one-and-one-half day orientation and training classes will be held on metric conversion--Metrics; An Orientation and Metrics; and A Correspondence Course.

¹⁴Other bureaus involved are--Alcohol, Tobacco and Firearms (ATF), Federal Law Enforcement Training Center (FLETC), Financial Management Service (FMS), Internal Revenue Service (IRS), and the Office of the Thrift Supervision.

3. A metric conversion plan will be finalized.
4. Metrication guidance will be added to Procurement and Decentralization Manuals.
5. An automatic data base will track the use of metric units in procurement transactions.
6. The Bureau newsletter will publish articles specifically on metric conversion.
7. Orientation and training video tapes, and written materials will be distributed to bureau offices and vendors.

U.S. Customs Service

1. A course about converting to the Metric System is being planned at the Federal Law Enforcement Training Center.
2. All future analytical instrumentation purchased by the Custom Service laboratories will be in metric units.

Bureau of Engraving and Printing (BEP)

1. The BEP Metric Transition Plan will be implemented.
2. Training requirements for metric conversion will be identified and appropriate BEP personnel will be sent to training seminars.

Financial Management Service

Bureau staff will attend the General Services Administration (GSA) class on metric conversion.

U.S. Mint

A detailed plan will be developed for a single facility procurement metrication pilot program. Both the Denver Mint and parts of the Washington, D.C. headquarters will be included in the pilot.

Bureau of the Public Debt

A Metrics Task Force will be created to determine what areas of the Bureau can introduce a metric policy.

U.S. Secret Service

The Office of Training will conduct a course for Contracting Officers' Technical Representatives which will include a training segment on the metrication program. In addition, similar metric conversion program material

will be included in a course entitled, "Executive and Management Acquisitions Overview Seminar."

Other Treasury Bureaus

Other bureaus are in the process of considering and developing different metric conversion plans.

DEPARTMENT OF VETERANS AFFAIRS (VA)

FY 1990 and 1991 Plans

1. VA representatives participated on the ICMP, the MOC, and MOC Subcommittees.
2. When the new VA X-series Specifications and Commercial Item Descriptions¹⁶ are reviewed or developed, these documents, prepared by VA, were converted to hard metric units when feasible.
3. The metric product acceptability clause was developed to comply with requirements contained in the Code of Federal Regulations, 50 C.F.R. 27578.
4. The VA uses conversion tables contained in the latest revision to Federal Standard #376 to determine the appropriate conversion from inch-pound units to metric units.
5. The VA adopted the metric product acceptability clause for use in medical, dental and veterinary equipment and supplies (Federal Supply Group 65) standardization documents that are jointly managed by VA and the Defense Personnel Support Center.
6. The Department uses metric units when submitting new items to the Defense Integrated Data System as required by the Federal Item Identification Guides.
7. The VA continues to distribute metric publications and related information to its staff.
8. The ICMP Construction Subcommittee concluded that it will not be feasible for the Construction industry to begin to design in metric units until FY 1994. The VA suggests that it will not be feasible for its building construction program to convert to the metric system by the end of FY 1992, or even by FY 1994. The Department is reviewing a request to exempt renovation projects from being required to convert. If approved, the exemption will be reviewed annually to determine its appropriateness.

¹⁶The X-series Specifications is a formal VA document that describes various awards given by the VA, such as flag service awards, badges, fighter pilot patches, pins, and so forth. Commercial Item Descriptions is a document that identifies commercial off-the-shelf items that can be purchased by VA.

9. The Chief of the Training Division in the VA central office informed VA training representatives about available GSA metric training courses, and provided registration information.

10. By the end of July 1991, VA guidelines and the metric transition plan will be completed and published in the Federal Register.

ADMINISTRATIVE CONFERENCE OF THE UNITED STATES

FY 1990 Actions

There were no actions or achievements reported during FY 1990.

FY 1991 Plans

1. The rules and regulations of the Metric Conversion Act will be thoroughly reviewed.
2. Agency employees will be informed about complying with the Act.
3. An agency representative will be sent to take the General Services Administration's course on metric conversion.

FY 1992 Proposals

Agency implementation of the metric system will be continued.

CENTRAL INTELLIGENCE AGENCY (CIA)

FY 1990 Actions

1. Agency representatives became members of the DOC ICMP and the MOC.
2. A task force has been created to assess the significance and impact of metric conversion on agency operations and to develop a detailed metrication transition plan.
3. The Task Force is determining the full extent that metric measurements already are used and is formally identifying measurement-sensitive policies and procedures throughout the agency.

FY 1991 Plans

1. The Metric Transition Plan will be completed to include the scope of the metric transition task at CIA.
2. Target dates will be set for meeting metrication milestones.
3. The agency will consider special agency initiatives to assist industry, particularly small businesses, as it voluntarily converts to the metric system.

4. Educational information and guidance in CIA publications will be produced to increase employee understanding of the metric system.

FY 1992 Proposals

The CIA will implement the specific tasks identified in the Metric Transition Plan.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

FY 1990 Actions

1. An information paper entitled, "National Metric Policy and FEMA," was written to orient top management and other managers regarding the legislative history of national metric policy, recent changes in the requirements affecting the agency, and the general recommended response to those requirements.
2. The General Counsel reviewed the orientation report and judged whether contents were in compliance with the legislative requirements for FEMA.
3. The general plan of action was drafted for a proposal to the agency director to meet the P.L. 100-418 mandate.
4. A FEMA representative attended DOC Interagency Council meetings.

FY 1991 Plans

1. The agency director will be briefed and his approval of the general plan of action for metric conversion compliance is expected by FY 1992.
2. The metric conversion plan of action will be initiated.

FEDERAL TRADE COMMISSION (FTC)

FY 1990 Actions

1. FTC representatives participated in DOC ICMP and MOC meetings. Also, the FTC delegate to the MOC chaired the MOC Subcommittee on Consumer Assistance.
2. Staff members reviewed each of the FTC consumer and business education publications to determine if revisions were necessary to comply with the law.
3. The MOC representative made a presentation at the annual National Metric Conference explaining the tension that occurred regarding the labeling requirements under the Fair Packaging and Labeling Act of 1966 requiring labels to use inch-pound units and the metric conversion mandate in P.L. 100-418.

FY 1991 and 1992 Plans

1. Active participation will be continued on the DOC Interagency Council and the MOC Committee and subcommittee.
2. Staff members will continue to revise FTC consumer and business education publications and, as appropriate, incorporate metric units into other agency activities to meet the metric conversion deadlines.
3. The General Services Administration governs FTC's procurement activities through its schedules and standards. FTC's purchases will be converted to the extent GSA's standards and schedules are converted.

GENERAL SERVICES ADMINISTRATION (GSA)

FY 1990 Actions

1. Metrication guidelines (GSA Order ADM 8000.1A) were developed through the efforts of the GSA Metric Steering Group. These guidelines, along with a Metric Transition Plan, were recognized by Congress as a model to be followed by other Federal agencies.
2. The Associate Administrator for Acquisition Policy represented GSA on the DOC ICMP and appointed the GSA Metric Coordinator who chairs the GSA Metric Steering Group and serves on the MOC and its steering group.
3. The GSA Metric Steering Committee identified eight tasks, embodied in a Metric Transition Plan, which it considered important to the ultimate success of the agency's metric conversion efforts.
4. Seven action plans were developed out of the eight tasks, mentioned above, listing necessary activities and milestone dates required for metric conversion.
5. A management information system was created to facilitate metric transition. The system consists of an action plan for each task and progress reports.
6. The GSA Interagency Training Center, responsible for developing an education and training program for personnel, completed two metric training courses.
7. The GSA Federal Supply Service created a schedule for reviewing about 8,000 documents included in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions to determine which were metric-measurement sensitive and possibly could be converted to the metric system.
8. The GSA Business Service Center provides counseling to small businesses, and planned to include information concerning the metric usage mandate of P.L. 100-418 to small businesses and small disadvantaged businesses with metric

capability (which were identified by the Small Business Administration and the Minority Business Development Agency).

9. GSA undertook several projects to increase public awareness and promote the cultural transition necessary to the success of metric transition.
10. GSA has worked actively for revising regulations to guide program managers and contracting officials in metric transition.
11. GSA chaired the Procurement and Supply Subcommittee of the DOC Metrication Operating Committee.
12. Information concerning converting to the metric system was prepared for the guidance document that was used with the standard solicitation document (SSD) for automatic data processing (ADP) acquisitions.

FY 1991 Plans

1. The membership of the GSA Metric Steering Group is being reviewed to ensure that its members can best represent GSA in coordinating the necessary direction the agency must follow to achieve its metric conversion program.
2. The review of technical documents in the GSA index will be hastened. Converting technical documents to the metric system requires close coordination with industry groups and other Federal agencies that are affected to guarantee that conversion is practical and consistent with other legal requirements.
3. The regulatory revision will be completed. Metric policy was to be placed in the February or March 1991 Federal Acquisition Circular; publishing amendatory language for the Federal Property Management Regulations (FPMR), which is scheduled to be created in FY 1992, will be expedited, if feasible; and GSA plans to issue a Federal Information Resources Management Regulation (FIRMR) bulletin on agencies' metric responsibility when acquiring automatic data processing and telecommunication resources.
4. GSA will develop projects to identify domestic firms that produce metric products.
5. Because of GSA's work with the Federal Training subcommittee to identify additional metric transition support services (including specialized SI metric training), the orientation course developed by the GSA Interagency Training Center will be presented at eight scheduled sessions throughout the country to benefit Federal employees.
6. Program guidance on metric conversion will be developed nationwide to help further GSA metric transition activities.
7. The agency will complete developing a standard solicitation paper for ADPE acquisitions and its associate guidance document containing instructions on the

use of metric units in technical designations for ADP and telecommunications resources.

8. The GSA Administrator has requested that two demonstration projects, constituting the agency's first metric building efforts, be designed in metric measurements. In addition, the agency has suggested that a project examining several aspects of the metric system from a construction perspective be coordinated through the MOC's Construction subcommittee. GSA has volunteered to provide a portion of the necessary funding for this initiative.

9. GSA plans to develop a survey of the electronics industry as a preliminary way to promote an interagency approach that would advance metric conversion. Such a survey is contingent upon approval by the Office of Management and Budget and the cooperation and support of the National Institute of Standards and Technology (NIST).

10. GSA will implement the use of metric standards into the acquisition process for ADP and telecommunication resources when made available by NIST and the Defense Communications Agency.

11. GSA, whose metric transition has to be coordinated with other Federal agencies, will continue to support Federal transition and national conversion to the metric system by participating on the Interagency Council on Metric Policy and the MOC.

FY 1992 Plans

1. The review of the technical documents in the GSA index will be completed.
2. A demonstration contract for building design and construction on a metric module will be awarded.
3. The metric usage policy developed by program offices will be implemented.

GOVERNMENT PRINTING OFFICE (GPO)

FY 1990 Actions

GPO completed preliminary work of the GPO Metric Transition Plan.

FY 1991 Plans

1. Details of the Metric Transition Plan will be initiated through input from the various GPO organizations.
2. Discussions will be held with graphic arts equipment manufacturers and suppliers regarding the availability of measurement sensitive products in metric.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

FY 1990 Actions

1. The Deputy Administrator of NASA issued a policy letter establishing the metric system as the preferred system of units for NASA programs.
2. Instructions implementing the metric program mandates the creation of an integrated NASA transition plan and requires the NASA program offices and field installations to support metric conversion.
3. NASA continued active support of the ICMP, the MOC, membership on the MOC steering group, and representation in MOC subcommittees.
4. The overall pace of metric conversion in NASA will depend on the rate at which the metric system is incorporated as the baseline measurement system for major flight programs. After creating the agency-wide NASA metric policy for new flight programs, detailed assessment and planning activities were initiated by the principal NASA program offices.
5. In September 1990, the Office of Space Science and Applications issued a metric policy and approved a preliminary metric transition plan. The proposed plan, based on an assessment of all current and active programs and launch projections through the year 2010, anticipates a rapid increase of potential metric payloads. Full conversion, however, could be effectively completed shortly after the year 2000.
6. Other major NASA program offices developed metric conversion plans including the Office of Space Flight, the Office of Aeronautics, Exploration and Technology, and the Office of Space Operations.
7. Metric transition was initiated by several NASA field centers through the creation of metric planning committees at several NASA installations.
8. The NASA Metrology Working Group, charged with coordinating and improving measurement abilities throughout the agency, assessed current metric measurement capability.
9. Initial metric conversion planning began in the areas of supply/logistics and facility construction (hampered by a reluctance of the entire construction industry to accept the metric system).
10. The agency continued to actively support the Interagency metric programs through the ICMP and MOC subcommittees, including the construction subcommittee, metric practices, and the education and training subcommittee.
11. Testifying on NASA's metric activities at hearings before the House Subcommittee on Science, Research and Technology of the Committee on Science, Space and Technology, NASA announced as its preliminary targets for metric transition planning: to establish metric policy by late 1990; define supporting requirements by late 1991; create a program office for metric

transition targets by mid-1992; and establish a target date for completing metric conversion by late 1992.

12. The NASA metric standard document, NASA SP 7012, was canceled after the present standards for metric conversion factors and metric practice were assessed to decide whether or not to update such existing standards. NASA will rely on existing non-Government standards such as that published by the American National Standards Institute (ANSI).

13. Experience with hybrid systems was examined to provide a basis for more detailed guidelines in that area.

14. A video conference was held with all the NASA field installations to inform them about metric developments, Headquarters planning, and issues affecting institutional planning.

FY 1991 Plans

1. Detailed instructions to implement the metric policy letter of FY 1990 will be distributed and incorporated into guiding metric conversion at the operating level. Also, additional policies that might be necessary within particular NASA programs will be developed.

2. Plans for metric conversion will be developed for the remaining program offices, projecting when inch-pound based programs will end and opportunities to introduce the metric system will occur.

3. Industry responses, during FY 1991, to the first request for metric hardware systems will indicate industry's readiness to support metric conversion.

4. Institutional-level planning will be enlarged to complete investigations of existing metric capabilities at NASA field installations and to define schedules and requirements for transition.

5. Assessments and planning for all functional areas involved in metric conversion will be performed and targeted toward defining needs and scheduling requirements by the end of the fiscal year.

NATIONAL SCIENCE FOUNDATION (NSF)

FY 1990 Actions

1. The Foundation plans to continue participating on the ICMP and the MOC.

2. NSF organized a Metric Committee to develop and propose policies and procedures for implementation of the metric system in connection with NSF activities.

3. The Foundation revised the booklet, *Grants for Research and Education in Science and Engineering*, that provides guidance to organizations when submitting proposals to NSF to metric system units.

4. A more comprehensive policy statement and procedures for implementing and using the metric system of measurements were initiated in FY 1990 and will be continued in FY 1991. Portions of these procedures that impact upon the public (basically grantees), will be announced in the Federal Register for public comment.

FY 1991 Plans

All the FY 1990 tasks mentioned above are expected to be completed during FY 1991.

NUCLEAR REGULATORY COMMISSION (NRC)

FY 1990 Actions

1. The NRC staff developed a draft metrication policy for Commission approval.
2. The Commission participated in the activities of both the DOC ICMP and the MOC.

FY 1991 Plans

The NRC will issue the metrication policy statement and continue active participation in the ICMP and the MOC.

OFFICE OF PERSONNEL MANAGEMENT (OPM)

FY 1990 Actions

1. OPM prepared a report on metric training requirements in Federal agencies and made recommendations that are now being implemented.
2. Agency representatives fully participated on the DOC ICMP and the MOC, and chairs the Subcommittee on Federal Employee Training.
3. OPM created a work group to examine the impact of P.L. 100-418 on the agency's operations and to develop a draft metric policy statement and plan to completely implement the policy by the due date.

FY 1991 Plans

1. OPM plans to develop the metric policy and implementation plan.
2. The agency will identify and assure appropriate training to employees whose jobs will require knowledge of the metric system.

3. The agency will review OPM's functions and areas of responsibility, and identify "measurement sensitive" activities where the metric system of measurement can be substituted for the inch-pound system.
4. OPM will develop a plan and schedule to make changes in rules, regulations, and publications to comply with OPM's metric usage policy.
5. The agency will continue to actively participate in the work of the ICMP and the MOC, and chair the Subcommittee on Federal Employee Training.
6. The agency will continue OPM's Government-wide role in metric training by taking part in interagency groups, in presentations at conferences and seminars, and through assistance to the human resources staffs of individual agencies.

FY 1992 Plans

1. The agency will continue to make changes in rules, regulations, and publications to comply with OPM's metric usage policy.
2. OPM will continue active participation in the work of the ICMP and MOC, and chair the Subcommittee on Federal Employee Training.
3. The agency will continue OPM's Government-wide role in metric training.

SMALL BUSINESS ADMINISTRATION (SBA)

FY 1990 Actions

1. The SBA Metrication Action Plan was developed and adopted.
2. The agency participated in ICMP and MOC committees and provided Federal leadership for guiding small businesses into metric conversion and ensuring that these businesses face minimal hardships when converting.

FY 1991 Plans

1. SBA will formally designate its coordinator for metric conversion.
2. The agency plans to complete and issue its Standard Operating Procedures (guidelines) on metrication.
3. The agency will continue participating in the ICMP and MOC committees and taking the leadership role in assisting small businesses that convert to the metric system.

U.S. CONSUMER PRODUCT SAFETY COMMISSION (U.S. CPSC)

FY 1990 Actions

The Commission maintained liaison with the ICMP and the MOC.

FY 1991 Plans

The Commission will develop internal policies and procedures (guidelines) for metric conversion.

FY 1992 Proposals

1. Employees will be trained in the use of the metric system.
2. Commission policies and procedures will be implemented.

U.S. INTERNATIONAL TRADE COMMISSION (U.S. ITC)

FY 1990 Actions

1. U.S. ITC representatives actively participated in the DOC ICMP and the MOC.
2. The U.S. ITC regulations and classification systems permitted the use of both inch-pound and metric units, as appropriate, to conform with prevailing industry practices.
3. A proposed U.S. ITC administrative notice outlining Commission policy and office responsibilities regarding use of the metric system was drafted, circulated, and issued.

FY 1991 and FY 1992 PLANS

1. During FY 1991, U.S. ITC intends to expand its use of metric units when purchasing goods and services as appropriate.
 2. During FY 1991 and 1992, U.S. ITC intends to continue active participation in the ICMP and MOC. Also, the Commission plans to emphasize using metric measures to the extent possible in questionnaires and analytical reports.
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